******* QUERY RESULTS *******

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=> d his l21

     (FILE 'HCAPLUS' ENTERED AT 10:44:21 ON 31 JUL 2009)
L21          11 S L20 AND (AY<2003 OR PY<2003 OR PRY<2003)

=> d que l21
L5          173 SEA FILE=REGISTRY ABB=ON  PLU=ON  (CA(L)SR(L)EU(L)MG(L)SI(L)O)/
                ELS
L6           50 SEA FILE=REGISTRY ABB=ON  PLU=ON  L5 (L) 6/ELC.SUB
L7        18854 SEA FILE=REGISTRY ABB=ON  PLU=ON  0.1<=CA<=0.4
L8         9464 SEA FILE=REGISTRY ABB=ON  PLU=ON  0<CA<0.1
L9        26079 SEA FILE=REGISTRY ABB=ON  PLU=ON  L7 OR L8
L10       18121 SEA FILE=REGISTRY ABB=ON  PLU=ON  0.1<=SR<=0.4
L11        5618 SEA FILE=REGISTRY ABB=ON  PLU=ON  0<EU<0.1
L12          13 SEA FILE=REGISTRY ABB=ON  PLU=ON  L6 AND L9
L13           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  L12 AND L10
L14           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  L13 AND L11
L15           1 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L14
L16           1 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L13
L17           1 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L15 OR L16
L18          10 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L12
L19          35 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L6
L20          35 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L17 OR L18 OR L19
L21          11 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L20 AND (AY<2003 OR PY<2003
                OR PRY<2003)


=> d l21 1-11 ibib abs hitstr hitind


L21  ANSWER 1 OF 11  HCAPLUS  COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER:        2004:119681  HCAPLUS  Full-text
DOCUMENT NUMBER:         140:189703
TITLE:                   Bivalent metal silicate phosphor and process for its
                         production, and a phosphor paste composition and a
                         vacuum ultraviolet ray excitation type light-emitting
                         device employing such a phosphor
INVENTOR(S):             Matsuda, Kouhei; Hisamune, Takayuki
PATENT ASSIGNEE(S):      Kasei Optonix, Ltd., Japan
SOURCE:                  U.S. Pat. Appl. Publ., 19 pp.
                         CODEN: USXXCO
DOCUMENT TYPE:           Patent
LANGUAGE:                English
FAMILY ACC. NUM. COUNT:  3
PATENT INFORMATION:

     PATENT NO.          KIND   DATE        APPLICATION NO.          DATE
     ----------------    ----   --------    --------------------     --------
     US 20040027047       A1    20040212    US 2003-391627           20030320 <--
     US 6899825           B2    20050531
     JP 2003277749        A     20031002    JP 2002-124997           20020322 <--
     JP 4046542           B2    20080213
     JP 2003342564        A     20031203    JP 2002-186899           20020523 <--
     JP 4146173           B2    20080903
     JP 2004131677        A     20040430    JP 2002-332900           20021010 <--
     JP 2004231930        A     20040819    JP 2003-60646            20030130
PRIORITY APPLN. INFO.:                      JP 2002-124997      A    20020322 <--
                                            JP 2002-186899      A    20020523 <--
                                            JP 2002-332900      A    20021010 <--
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JP 2003-60646 A 20030130

AB Europium-activated bivalent metal silicate phosphors are described which comprises, as matrix crystal, a silicate containing, as constituting metal elements, Ca, Mg and Si and which is activated by Eu, and contains a specific amount of at least one of La, Ba, Sr, Zn, Y, Ce, In, Bi, chlorine, bromine and iodine in the crystalline matrix. Processes for phosphor production, a phosphor paste composition and a vacuum-UV-excitation type light-emitting device employing the phosphors are also discussed.

IT 627810-26-8P 627810-28-0P 657350-10-2P
RL: DEV (Device component use); IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(europium-doped bivalent metal silicate phosphors, their preparation and use
in phosphor paste composition and vacuum-UV excitation light-emitting devices)

RN 627810-26-8 HCAPLUS
CN Calcium europium magnesium strontium silicate (Ca0.97Eu0.02MgSr0.01(SiO3)2) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O3Si	2	15593-90-5
Ca	0.97	7440-70-2
Eu	0.02	7440-53-1
Sr	0.01	7440-24-6
Mg	1	7439-95-4

RN 627810-28-0 HCAPLUS
CN Calcium europium magnesium strontium silicate (Ca0.88Eu0.02MgSr0.1(SiO3)2) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O3Si	2	15593-90-5
Ca	0.88	7440-70-2
Eu	0.02	7440-53-1
Sr	0.1	7440-24-6
Mg	1	7439-95-4

RN 657350-10-2 HCAPLUS
CN Calcium europium magnesium strontium silicate (Ca0.93Eu0.02MgSr0.05(SiO3)2) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O3Si	2	15593-90-5
Ca	0.93	7440-70-2
Eu	0.02	7440-53-1
Sr	0.05	7440-24-6
Mg	1	7439-95-4

IC ICM H01J001-62
INCL 313483000
CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 76

IT 606933-54-4P 606933-55-5P 627810-25-7P 627810-26-8P
627810-28-0P 627810-29-1P, Calcium europium magnesium zinc
silicate (Ca0.98Eu0.02Mg0.99Zn0.01(SiO3)2) 657350-10-2P
657350-11-3P 657350-12-4P 657350-13-5P 657350-14-6P
RL: DEV (Device component use); IMF (Industrial manufacture); PRP
(Properties); TEM (Technical or engineered material use); PREP
(Preparation); USES (Uses)
(europium-doped bivalent metal silicate phosphors, their preparation and
use
in phosphor paste composition and vacuum-UV excitation light-emitting
devices)

OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD
(5 CITINGS)
REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 2 OF 11 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2003:945575 HCAPLUS Full-text
DOCUMENT NUMBER: 140:10356
TITLE: Divalent metal silicate blue phosphors with good
vacuum-UV resistance, their paste compositions, and
vacuum-UV-induced luminescence devices
INVENTOR(S): Matsuda, Kohei; Hisamune, Takayuki
PATENT ASSIGNEE(S): Kasei Optonix, Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003342564	A	20031203	JP 2002-186899	20020523 <--
JP 4146173	B2	20080903		
US 20040027047	A1	20040212	US 2003-391627	20030320 <--
US 6899825	B2	20050531		
PRIORITY APPLN. INFO.:			JP 2002-124997 A	20020322 <--
			JP 2002-186899 A	20020523 <--
			JP 2002-332900 A	20021010 <--
			JP 2003-60646 A	20030130

AB The invention relates to the phosphors comprising (A) Eu as a dopant, (B)
silicate crystals that contain Ca, Mg, and Si, and (C) ≥1 element selected
from Ba, Sr, Zn, Y, Ce, In, and Bi, useful for a light source of a scanner, a
plasma display panel, etc.

IT 627810-26-8P 627810-27-9P 627810-28-0P
RL: DEV (Device component use); IMF (Industrial manufacture); PREP
(Preparation); USES (Uses)
(phosphor; divalent metal silicate blue phosphors with good vacuum-UV
resistance)

RN 627810-26-8 HCAPLUS
CN Calcium europium magnesium strontium silicate
(Ca0.97Eu0.02MgSr0.01(SiO3)2) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O3Si	2	15593-90-5
Ca	0.97	7440-70-2
Eu	0.02	7440-53-1

Sr	0.01	7440-24-6
Mg	1	7439-95-4

RN 627810-27-9 HCAPLUS
CN Calcium europium magnesium strontium silicate (Ca0.95Eu0.02MgSr0.03(SiO3)2) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O3Si	2	15593-90-5
Ca	0.95	7440-70-2
Eu	0.02	7440-53-1
Sr	0.03	7440-24-6
Mg	1	7439-95-4

RN 627810-28-0 HCAPLUS
CN Calcium europium magnesium strontium silicate (Ca0.88Eu0.02MgSr0.1(SiO3)2) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O3Si	2	15593-90-5
Ca	0.88	7440-70-2
Eu	0.02	7440-53-1
Sr	0.1	7440-24-6
Mg	1	7439-95-4

IC ICM C09K011-59
ICS C09K011-00; C09K011-08; H01J061-44
CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 76
IT 627810-25-7P 627810-26-8P 627810-27-9P
627810-28-0P 627810-29-1P, Calcium europium magnesium zinc silicate (Ca0.98Eu0.02Mg0.99Zn0.01(SiO3)2) 627810-30-4P 627810-31-5P
627810-32-6P 627810-33-7P
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(phosphor; divalent metal silicate blue phosphors with good vacuum-UV resistance)

L21 ANSWER 3 OF 11 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2003:931455 HCAPLUS Full-text
DOCUMENT NUMBER: 140:10725
TITLE: Plasma display unit containing specific blue phosphor
INVENTOR(S): Kawamura, Hiroyuki; Sugimoto, Kazuhiko; Aoki, Masaki; Otani, Mitsuhiro; Setoguchi, Hiroshi; Hibino, Junichi
PATENT ASSIGNEE(S): Matsushita Electric Industrial Co., Ltd., Japan
SOURCE: PCT Int. Appl., 37 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003097767	A1	20031127	WO 2003-JP6047	20030515 <--

W: CN, KR, US
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR

JP 2003336048	A	20031128	JP 2002-142659	20020517 <--
JP 4096619	B2	20080604		
CN 1556843	A	20041222	CN 2003-801060	20030515 <--
CN 1238466	C	20060125		
EP 1506989	A1	20050216	EP 2003-752903	20030515 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, SK				
US 20040239247	A1	20041202	US 2004-489326	20040311 <--
US 7161298	B2	20070109		

PRIORITY APPLN. INFO.:			JP 2002-142659	A 20020517 <--
			WO 2003-JP6047	W 20030515

AB A the invention relates to a plasma display unit comprising a blue phosphor constituted of a compound of the formula Me3MgSi2O8:Eux (wherein Me represents at least one member of calcium (Ca), strontium (Sr) and barium (Ba)) wherein with respect to the europium (Eu) atoms as a constituent thereof, the concentration of bivalent Eu ions is in the range of 45-95% while the concentration of trivalent Eu ions is in the range of 5-55%. A plasma display unit of high luminance and long life whose luminance deterioration in the process of panel production is less can be obtained.

IT 627873-88-5
RL: TEM (Technical or engineered material use); USES (Uses)
(blue phosphor for plasma display unit)

RN 627873-88-5 HCAPLUS

CN Calcium europium magnesium strontium silicate (Ca0.25Eu0.1MgSr2.45(SiO4)2) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O4Si	2	17181-37-2
Ca	0.25	7440-70-2
Eu	0.1	7440-53-1
Sr	2.45	7440-24-6
Mg	1	7439-95-4

IC ICM C09K011-64
ICS C09K011-08; H01J011-02

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 627873-85-2 627873-88-5 627873-89-6 627873-90-9, Calcium europium magnesium silicate (Ca2.4Eu0.2Mg(SiO4)2)
RL: TEM (Technical or engineered material use); USES (Uses)
(blue phosphor for plasma display unit)

OS.CITING REF COUNT: 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS RECORD (18 CITINGS)

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 4 OF 11 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2003:868362 HCAPLUS Full-text

DOCUMENT NUMBER: 139:371582

TITLE: Phosphors having high luminance after plasma exposure and their pastes

INVENTOR(S): Ono, Keiji; Miyazaki, Susumu

PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF

DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003313549	A	20031106	JP 2002-122050	20020424 <--

PRIORITY APPLN. INFO.: JP 2002-122050 20020424 <--

AB The phosphors, useful for vacuum UV-excited light-emitting devices (e.g., plasma display panels, fluorescent lamps), contain first components comprising mM1O.nM2O.2M3O2 (M1 = Ba and/or Ca, Sr and Ba or Ca; M2 = Mg and/or Zn; M3 = Si and/or Ge; 0.5 ≤ m ≤ 3.5; 0.5 ≤ n ≤ 2.5) and Eu and/or Mn as activators and second components comprising aluminates.

IT 406226-89-9 620609-81-6
RL: TEM (Technical or engineered material use); USES (Uses)
(phosphors containing two kinds of luminescent substances and showing high luminance after plasma exposure for vacuum UV-excited light-emitting devices)

RN 406226-89-9 HCAPLUS
CN Calcium europium magnesium strontium silicate (Ca0.8-1Eu0-0.1MgSr0-0.1(SiO3)2) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O3Si	2	15593-90-5
Ca	0.8 - 1	7440-70-2
Eu	0 - 0.1	7440-53-1
Sr	0 - 0.1	7440-24-6
Mg	1	7439-95-4

RN 620609-81-6 HCAPLUS
CN Calcium europium magnesium strontium silicate (Ca0.92Eu0.03MgSr0.05(SiO3)2) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O3Si	2	15593-90-5
Ca	0.92	7440-70-2
Eu	0.03	7440-53-1
Sr	0.05	7440-24-6
Mg	1	7439-95-4

IC ICM C09K011-08
ICS C09K011-59; C09K011-64; C09K011-66
CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 74
IT 12254-04-5, Aluminum barium magnesium oxide (Al10BaMgO17) 128124-38-9, Aluminum barium europium magnesium oxide (Al5Ba0.45Eu0.05Mg0.5O8.5) 406226-89-9 620609-81-6 620609-82-7, Aluminum barium europium magnesium oxide (Al10Ba0.7-1Eu0-0.3MgO17)
RL: TEM (Technical or engineered material use); USES (Uses)
(phosphors containing two kinds of luminescent substances and showing high luminance after plasma exposure for vacuum UV-excited light-emitting devices)
OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

L21 ANSWER 5 OF 11 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2003:472866 HCAPLUS Full-text
DOCUMENT NUMBER: 139:43984
TITLE: Method for producing silicate phosphor
INVENTOR(S): Ono, Keiji; Takeda, Takashi; Miyazaki, Susumu
PATENT ASSIGNEE(S): Sumitomo Chemical Company, Limited, Japan
SOURCE: U.S. Pat. Appl. Publ., 4 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20030111643	A1	20030619	US 2002-318146	20021213 <--
US 6884367	B2	20050426		
JP 2003183644	A	20030703	JP 2001-385832	20011219 <--
JP 3915504	B2	20070516		
JP 2004002512	A	20040108	JP 2002-158909	20020531 <--
JP 4023222	B2	20071219		
TW 285672	B	20070821	TW 2002-91136169	20021213 <--
EP 1321500	A2	20030625	EP 2002-28107	20021217 <--
EP 1321500	A3	20050727		
EP 1321500	B1	20090225		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
CN 1445332	A	20031001	CN 2002-157898	20021217 <--
CN 1315982	C	20070516		

PRIORITY APPLN. INFO.: JP 2001-385832 A 20011219 <--
JP 2002-158909 A 20020531 <--

AB The object of the present invention is to provide a production method for a silicate phosphor having high brightness. This object is achieved by the method for producing a silicate phosphor comprising a step of calcining a mixture of metal compds., wherein 1 of the metal compds. is Si oxide having BET sp. surface area of ≥10 m 2 /g.

IT 541547-30-2P
RL: IMF (Industrial manufacture); PREP (Preparation)
(for producing silicate phosphor)
RN 541547-30-2 HCAPLUS
CN Calcium europium magnesium strontium silicate (Ca0.86Eu0.05MgSr0.1(SiO3)2) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O3Si	2	15593-90-5
Ca	0.86	7440-70-2
Eu	0.05	7440-53-1
Sr	0.1	7440-24-6
Mg	1	7439-95-4

IC ICM C09K011-00
INCL 252301400F
CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 49
IT 541547-30-2P
RL: IMF (Industrial manufacture); PREP (Preparation)

(for producing silicate phosphor)
OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (9 CITINGS)
REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 6 OF 11 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2003:353826 HCAPLUS Full-text
DOCUMENT NUMBER: 138:360191
TITLE: Luminescent device for optical display apparatus
INVENTOR(S): Suzuki, Teruki; Oshiki, Masatoshi; Okazaki, Choichiro
PATENT ASSIGNEE(S): Hitachi Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003132803	A	20030509	JP 2001-331855	20011030 <--
JP 4122752	B2	20080723		
TW 290329	B	20071121	TW 2002-91124800	20021024 <--
CN 1417831	A	20030514	CN 2002-147086	20021029 <--
CN 100405522	C	20080723		
CN 1932930	A	20070321	CN 2006-10141650	20021029 <--
US 20030085853	A1	20030508	US 2002-283140	20021030 <--
US 7138965	B2	20061121		
US 20070018912	A1	20070125	US 2006-526620	20060926 <--
KR 2009056941	A	20090603	KR 2009-33681	20090417 <--

PRIORITY APPLN. INFO.:

JP 2001-331855	A	20011030 <--
JP 2001-333675	A	20011031 <--
JP 2001-333681	A	20011031 <--
CN 2002-147086	A3	20021029 <--
KR 2002-66323	A3	20021030 <--
US 2002-283140	A1	20021030 <--

AB The invention relates to a luminescent device for an optical display apparatus, such as plasma displays, and FED, comprising the divalent Eu-activated alkali earth silicate phosphor represented by (Ae)3-x(Ae')Si2O8:Eux [Ae = Sr, Ca, and Ba; Ae' = Mg and Zn; and 0.01 ≤ x ≤0.1], providing a blue-emitting phosphor for VUV and low energy electron beam excitations.
IT 130430-65-8
RL: DEV (Device component use); USES (Uses)
(luminescent device for optical display apparatus)
RN 130430-65-8 HCAPLUS
CN Calcium europium magnesium strontium silicate (Ca0.1Eu0.03MgSr2.87(SiO4)2) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O4Si	2	17181-37-2
Ca	0.1	7440-70-2
Eu	0.03	7440-53-1
Sr	2.87	7440-24-6
Mg	1	7439-95-4

IC ICM H01J011-02
ICS C09K011-08; C09K011-59; C09K011-78; C09K011-79; C09K011-80;

C09K011-81; C09K011-83
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 74
IT 121797-58-8, Europium magnesium strontium silicate (Eu0.03MgSr2.97(SiO4)2) 130430-65-8 518329-56-1, Europium magnesium strontium silicate (Eu0.1MgSr2.9(SiO4)2) 519183-31-4, Europium magnesium strontium silicate (Eu0.01MgSr2.99(SiO4)2) 519183-32-5, Europium magnesium strontium silicate (Eu0.02MgSr2.98(SiO4)2) 519183-33-6, Europium magnesium strontium silicate (Eu0.05MgSr2.95(SiO4)2) 519183-34-7 519183-35-8, Calcium europium magnesium silicate (Ca2.9Eu0.1Mg(SiO4)2) 519183-36-9 519183-37-0 519183-38-1 519183-39-2 519183-40-5 519183-41-6, Barium europium magnesium silicate (Ba2.9Eu0.1Mg(SiO4)2) 519183-42-7 519183-43-8 519183-44-9 519183-45-0 519183-46-1
RL: DEV (Device component use); USES (Uses)
(luminescent device for optical display apparatus)
OS.CITING REF COUNT: 13 THERE ARE 13 CAPLUS RECORDS THAT CITE THIS RECORD (24 CITINGS)

L21 ANSWER 7 OF 11 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2002:253046 HCAPLUS Full-text
DOCUMENT NUMBER: 136:286263
TITLE: Phosphors for vacuum-UV-excited light-emitting devices
INVENTOR(S): Toda, Kenji; Sato, Mineo; Ono, Keiji; Miyazaki, Susumu; Takeda, Takashi
PATENT ASSIGNEE(S): Sumitomo Chemical Company, Limited, Japan
SOURCE: Eur. Pat. Appl., 6 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1193306	A2	20020403	EP 2001-123144	20010927 <--
EP 1193306	A3	20040102		
EP 1193306	B1	20090513		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2002332481	A	20021122	JP 2001-259235	20010829 <--
JP 3985478	B2	20071003		
US 20020038861	A1	20020404	US 2001-960955	20010925 <--
US 6802990	B2	20041012		
TW 228535	B	20050301	TW 2001-90123630	20010925 <--
CN 1345908	A	20020424	CN 2001-137167	20010927 <--
CN 100338170	C	20070919		
CN 101033397	A	20070912	CN 2007-10096613	20010927 <--
KR 760882	B1	20071004	KR 2001-59984	20010927 <--
CN 101200637	A	20080618	CN 2007-10096182	20010927 <--
JP 2007246918	A	20070927	JP 2007-138850	20070525 <--
JP 2007277567	A	20071025	JP 2007-138849	20070525 <--
JP 2007284683	A	20071101	JP 2007-138848	20070525 <--
PRIORITY APPLN. INFO.:			JP 2000-299320 A	20000929 <--
			JP 2001-66318 A	20010309 <--
			JP 2001-259235 A3	20010829 <--
			CN 2001-137167 A3	20010927 <--

AB Fluorescent materials for vacuum-UV-excited light-emitting devices are described by the general formula, mM1O·nM2O·2M3O2, where M1 is ≥1 metal selected from Ca, Sr and Ba, M2 is ≥1 metal selected from Mg and Zn, M3 is ≥1

element selected from Si and Ge, and m and n satisfy 0.5≤m≤3.5 and 0.5≤n≤2.5, resp., provided that when m=n=1, M1 is either ≥2 metals selected from Ca, Sr and Ba, or 1 of Sr and Ba; and ≥1 metal selected from Eu and Mn as an activator. Vacuum-UV-excited light-emitting devices employing the phosphors are also discussed.

IT 406226-89-9
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(phosphors for vacuum-UV-excited light-emitting devices with small decrease in luminance after exposure to plasma or to heat treatment)
RN 406226-89-9 HCAPLUS
CN Calcium europium magnesium strontium silicate (Ca0.8-1Eu0-0.1MgSr0-0.1(SiO3)2) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O3Si	2	15593-90-5
Ca	0.8 - 1	7440-70-2
Eu	0 - 0.1	7440-53-1
Sr	0 - 0.1	7440-24-6
Mg	1	7439-95-4

IT 406226-83-3P
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(phosphors for vacuum-UV-excited light-emitting devices with small decrease in luminance after exposure to plasma or to heat treatment)
RN 406226-83-3 HCAPLUS
CN Calcium europium magnesium strontium silicate (Ca0.92Eu0.03MgSr0.48(SiO3)2) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O3Si	2	15593-90-5
Ca	0.92	7440-70-2
Eu	0.03	7440-53-1
Sr	0.48	7440-24-6
Mg	1	7439-95-4

IC ICM C09K011-78
ICS C09K011-79; C09K011-66
CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 76
IT 406226-89-9
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(phosphors for vacuum-UV-excited light-emitting devices with small decrease in luminance after exposure to plasma or to heat treatment)
IT 406226-83-3P 406226-84-4P 406226-85-5P, Barium europium magnesium oxide silicate (Ba1.98Eu0.02MgO(SiO3)2) 406226-86-6P 406226-87-7P, Europium strontium zinc oxide silicate (Eu0.02Sr1.98ZnO(SiO3)2) 406226-88-8P, Calcium europium magnesium silicate (Ca0.95Eu0.05Mg(SiO3)2)
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); SPN (Synthetic preparation); TEM (Technical or

engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(phosphors for vacuum-UV-excited light-emitting devices with small decrease in luminance after exposure to plasma or to heat treatment)

OS.CITING REF COUNT: 21 THERE ARE 21 CAPLUS RECORDS THAT CITE THIS RECORD (45 CITINGS)
REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 8 OF 11 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1997:775705 HCAPLUS Full-text
DOCUMENT NUMBER: 128:107916
ORIGINAL REFERENCE NO.: 128:21029a,21032a
TITLE: Synthesis of solid solutions based on the akermanite and/or hardystnite systems and their fluorescence properties
AUTHOR(S): Kakitani, Satoru; Ishii, Hiroshi; Yamaguchi, Kazuhiro
CORPORATE SOURCE: Department of Applied Science, Faculty of Science, Okayama University of Science, Okayama, 701, Japan
SOURCE: Japanese Journal of Applied Physics, Part 1: Regular Papers, Short Notes & Review Papers (1997), 36(11), 6793-6797
CODEN: JAPNDE; ISSN: 0021-4922
PUBLISHER: Japanese Journal of Applied Physics
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The authors studied the incorporation of Eu into Akermanite and Hardystnite crystals and the fluorescence properties of the substances and Eu was incorporated into Akermanite or Hardystnite only when it was co-doped with Na. This procedure enabled limited substitution of Eu3+ for Ca, resulting in the emission of 600 nm red fluorescence under UV irradiation Eu was, however, incorporated into Akermanite- or Hardystnite-based solid solns., which were made by limited substitution of Sr for Ca as a form of Eu2+. These substances exhibited emission of blue-colored fluorescence with a spectrum peak around 500 nm. Also Hardystnite and Sr-Hardystnite (Sr substituted for Ca) formed a continuous series of solid solution

IT 201229-03-0P 201229-04-1P 201229-05-2P
201229-06-3P 201229-07-4P
RL: PNU (Preparation, unclassified); PRP (Properties); PREP (Preparation)
(synthesis of solid solns. based on akermanite and/or hardystnite systems and fluorescence properties)

RN 201229-03-0 HCAPLUS
CN Calcium europium magnesium strontium oxide silicate (Ca0.99Eu0.02MgSr0.2O(SiO3)2) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	1	17778-80-2
O3Si	2	15593-90-5
Ca	0.99	7440-70-2
Eu	0.02	7440-53-1
Sr	0.2	7440-24-6
Mg	1	7439-95-4

RN 201229-04-1 HCAPLUS
CN Calcium europium magnesium strontium oxide silicate (Ca0.99Eu0.02MgSr0.4O(SiO3)2) (CA INDEX NAME)

Component	Ratio	Component Registry Number

O	1	17778-80-2
O3Si	2	15593-90-5
Ca	0.99	7440-70-2
Eu	0.02	7440-53-1
Sr	0.4	7440-24-6
Mg	1	7439-95-4

RN 201229-05-2 HCAPLUS
CN Calcium europium magnesium strontium oxide silicate (Ca0.99Eu0.02MgSr0.99O(SiO3)2) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	1	17778-80-2
O3Si	2	15593-90-5
Ca	0.99	7440-70-2
Eu	0.02	7440-53-1
Sr	0.99	7440-24-6
Mg	1	7439-95-4

RN 201229-06-3 HCAPLUS
CN Calcium europium magnesium strontium oxide silicate (Ca0.99Eu0.02MgSr0.59O(SiO3)2) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	1	17778-80-2
O3Si	2	15593-90-5
Ca	0.99	7440-70-2
Eu	0.02	7440-53-1
Sr	0.59	7440-24-6
Mg	1	7439-95-4

RN 201229-07-4 HCAPLUS
CN Calcium europium magnesium strontium oxide silicate (Ca0.99Eu0.02MgSr0.79O(SiO3)2) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	1	17778-80-2
O3Si	2	15593-90-5
Ca	0.99	7440-70-2
Eu	0.02	7440-53-1
Sr	0.79	7440-24-6
Mg	1	7439-95-4

CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 75, 78
IT 13573-15-4P, Calcium magnesium silicate (Ca2MgSi2O7) 13842-59-6P, Strontium zinc silicate (Sr2ZnSi2O7) 14565-87-8P, Calcium zinc silicate (Ca2ZnSi2O7) 201228-88-8P 201228-89-9P 201228-90-2P 201228-91-3P 201228-92-4P 201228-93-5P 201228-94-6P, Calcium europium oxide silicate (Ca2Eu8O2(SiO4)5) 201228-95-7P 201228-96-8P 201228-97-9P 201228-98-0P, Calcium europium zinc oxide silicate (Ca1.98Eu0.02ZnO(SiO3)2) 201228-99-1P, Calcium europium zinc oxide

silicate (Ca1.95Eu0.05ZnO(SiO3)2) 201229-00-7P 201229-01-8P, Calcium europium oxide silicate (CaEu4O2(SiO4)3) 201229-02-9P 201229-03-0P 201229-04-1P 201229-05-2P 201229-06-3P 201229-07-4P 201229-08-5P, Calcium strontium zinc oxide silicate (Ca1.2Sr0.8ZnO(SiO3)2) 201229-09-6P, Calcium strontium zinc oxide silicate (Ca0.4Sr1.6ZnO(SiO3)2) 201229-10-9P, Calcium europium zinc oxide silicate (Ca0.99Eu0.02ZnO(SiO3)2) 201229-11-0P 201229-12-1P 201229-13-2P, Europium strontium zinc oxide silicate (Eu0.02Sr0.99ZnO(SiO3)2)
RL: PNU (Preparation, unclassified); PRP (Properties); PREP (Preparation)
(synthesis of solid solns. based on akermanite and/or hardystnite systems and fluorescence properties)

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 9 OF 11 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1991:133113 HCAPLUS Full-text
DOCUMENT NUMBER: 114:133113
ORIGINAL REFERENCE NO.: 114:22443a,22446a
TITLE: Cathode-ray tube
INVENTOR(S): Yamamoto, Akira; Suzuki, Teruki; Yamada, Takamichi; Matsukyo, Hideji
PATENT ASSIGNEE(S): Hitachi, Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02135276	A	19900524	JP 1988-287679	19881116 <--
PRIORITY APPLN. INFO.:			JP 1988-287679	19881116 <--

AB A cathode-ray tube, especially a blue color tube for a projection TV, having a screen load ≥0.1 W/cm2, comprises a fluorescent screen made from a ZnS:Ag, Al 1st phosphor and a 2nd phosphor having chromaticity coordinated defined by x ≤ 0.2 and y ≤ 0.2, an electron-beam luminescence energy efficiency ≥15% of the 1st phosphor, and an exponent of the power approx. in luminescent vs. cathode current relation ≥0.8, wherein the weight ratio of the 2nd phosphor to the 1st is 0.4-2.3.

IT 130430-65-8
RL: USES (Uses)
(blue phosphor blend containing, for projection TV tube)

RN 130430-65-8 HCAPLUS
CN Calcium europium magnesium strontium silicate (Ca0.1Eu0.03MgSr2.87(SiO4)2) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O4Si	2	17181-37-2
Ca	0.1	7440-70-2
Eu	0.03	7440-53-1
Sr	2.87	7440-24-6
Mg	1	7439-95-4

IC ICM C09K011-08
ICS C09K011-56; H01J029-20

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
IT 1314-98-3, Zinc sulfide, uses and miscellaneous 53201-92-6
121797-58-8, Europium magnesium strontium silicate (Eu0.03MgSr2.97(SiO4)2)
130430-59-0, Europium potassium strontium phosphate (Eu0.05KSr0.95(PO4))
130430-60-3, Europium potassium strontium phosphate (Eu0.03KSr0.97(PO4))
130430-61-4 130430-62-5 130430-63-6 130430-64-7
130430-65-8 130459-24-4
RL: USES (Uses)
(blue phosphor blend containing, for projection TV tube)

L21 ANSWER 10 OF 11 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1990:128850 HCAPLUS Full-text
DOCUMENT NUMBER: 112:128850
ORIGINAL REFERENCE NO.: 112:21637a,21640a
TITLE: Europium-activated alkaline earth zinc silicate phosphor
INVENTOR(S): Suzuki, Teruki; Yamada, Takamichi; Matsukyo, Hideji; Yamamoto, Akira
PATENT ASSIGNEE(S): Hitachi, Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 01167394	A	19890703	JP 1987-323998	19871223 <--
PRIORITY APPLN. INFO.:			JP 1987-323998	19871223 <--

AB The phosphor comprises (M3Mg)1-xZnxSi2O8 (M = Sr, Ca, and/or Ba; 2 + 10-5 ≤ x ≤ 1 + 10-2) activated by Eu2+. The phosphor is useful for a cathode-ray tube in a projector or tricolor fluorescent lamp. {(Sr2.97Eu0.03)Mg}1-xZnxSi2O8 (x = 2 + 10-5) showed fluorescence at 458 nm with high efficiency.
IT 124698-06-2
RL: PRP (Properties)
(europium-activated, phosphor, for fluorescent lamp or cathode-ray tube)
RN 124698-06-2 HCAPLUS
CN Calcium europium magnesium strontium silicate (Ca0.08Eu0.03MgSr2.92(SiO4)2) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O4Si	2	17181-37-2
Ca	0.08	7440-70-2
Eu	0.03	7440-53-1
Sr	2.92	7440-24-6
Mg	1	7439-95-4

IC ICM C09K011-59
ICS H01J029-20
CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
IT 121797-58-8, Europium magnesium strontium silicate (Eu0.03MgSr2.97(SiO4)2)
124698-04-0, Barium europium magnesium silicate (Ba2.98Eu0.02Mg(SiO4)2)
124698-05-1, Calcium europium magnesium silicate (Ca2.98Eu0.02Mg(SiO4)2)
124698-06-2 124698-07-3 125750-28-9

RL: PRP (Properties)
(europium-activated, phosphor, for fluorescent lamp or cathode-ray tube)
OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L21 ANSWER 11 OF 11 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1989:467604 HCAPLUS Full-text
DOCUMENT NUMBER: 111:67604
ORIGINAL REFERENCE NO.: 111:11247a,11250a
TITLE: Manufacture of alkaline earth-magnesium silicate blue-emitting phosphor
INVENTOR(S): Suzuki, Teruki; Yamada, Takamichi; Matsukyo, Hideji; Yamamoto, Akira
PATENT ASSIGNEE(S): Hitachi, Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 01006087	A	19890110	JP 1987-161335	19870630 <--
PRIORITY APPLN. INFO.:			JP 1987-161335	19870630 <--

AB A process for manufacturing a blue-emitting phosphor, M3MgSi2O3: Eu2+ (M = ≥1 selected from Ca, Sr, and Ba), comprises subjecting raw material consisting of M-containing compds., Mg-containing compd(s), and SiO2 to reaction in the presence of a halide of Eu, and Br and/or I-containing compd(s) as flux, followed by refiring, as required, the product in the presence of compds. selected from Na2SO4, K2SO4, and Rb2SO4.
IT 121797-57-7P
RL: IMF (Industrial manufacture); PREP (Preparation)
(phosphor, blue-emitting, manufacture of)
RN 121797-57-7 HCAPLUS
CN Calcium europium magnesium strontium silicate (Ca0.6Eu0.03MgSr2.37(SiO4)2) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O4Si	2	17181-37-2
Ca	0.6	7440-70-2
Eu	0.03	7440-53-1
Sr	2.37	7440-24-6
Mg	1	7439-95-4

IC ICM C09K011-59
ICS H01J029-20; H01J061-44
CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
IT 121797-56-6P 121797-57-7P 121797-58-8P, Europium magnesium strontium silicate (Eu0.03MgSr2.97(SiO4)2)
RL: IMF (Industrial manufacture); PREP (Preparation)
(phosphor, blue-emitting, manufacture of)
OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

******* SEARCH HISTORY *******

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     (FILE 'HOME' ENTERED AT 10:32:14 ON 31 JUL 2009)

     FILE 'LREGISTRY' ENTERED AT 10:32:23 ON 31 JUL 2009
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L2            15 SEA ABB=ON  PLU=ON  0.1-0.4/CA
L3            15 SEA ABB=ON  PLU=ON  0.1<=CA<=0.4
L4            13 SEA ABB=ON  PLU=ON  0<CA<0.1

     FILE 'REGISTRY' ENTERED AT 10:41:05 ON 31 JUL 2009
L5           173 SEA ABB=ON  PLU=ON  (CA(L)SR(L)EU(L)MG(L)SI(L)O)/ELS
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L7         18854 SEA ABB=ON  PLU=ON  0.1<=CA<=0.4
L8          9464 SEA ABB=ON  PLU=ON  0<CA<0.1
L9         26079 SEA ABB=ON  PLU=ON  L7 OR L8
L10        18121 SEA ABB=ON  PLU=ON  0.1<=SR<=0.4
L11         5618 SEA ABB=ON  PLU=ON  0<EU<0.1
L12           13 SEA ABB=ON  PLU=ON  L6 AND L9
L13            1 SEA ABB=ON  PLU=ON  L12 AND L10
L14            1 SEA ABB=ON  PLU=ON  L13 AND L11
                 D SCAN

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L16            1 SEA ABB=ON  PLU=ON  L13
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                 D SCAN TI
L18           10 SEA ABB=ON  PLU=ON  L12
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L20           35 SEA ABB=ON  PLU=ON  L17 OR L18 OR L19
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